UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,248	09/09/2003	Nobuyasu Suzuki	SUZUKI=25A	4043

1444 7590 02/07/2007
BROWDY AND NEIMARK, P.L.L.C.
624 NINTH STREET, NW
SUITE 300
WASHINGTON, DC 20001-5303

EXAMINER	
BASHORE, ALAIN L	
ART UNIT	PAPER NUMBER
1762	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/07/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/657,248	SUZUKI ET AL.	
	Examiner	Art Unit	
	Alain L. Bashore	1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 December 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) *1,9 and 10* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of claims 2-8 in the reply filed on 12-1-06 is acknowledged. The traversal is on the ground(s) that no serious burden, and that product by process are normally kept with the process. This is not found persuasive because:

The presence of multiple inventions would not necessary, in and of itself, cause an undue burden on the examiner because of the excessive time required to perform searches of different inventions. However, the burden on the examiner extends to PATENTABILITY ISSUES associated with, and evolving from, searching multiple different inventions. Issues related to one statutory class are generally very different from those of other statutory classes. That is, issues arising from method claims would potentially be very different from those of article or apparatus claims, and may require complex evidence to resolve critical issues which would be dissimilar and unfamiliar to an examiner in an unrelated art area. Hence, the examination of multiple inventions, in this case directed to apparatus and product by process, represents a serious and undue burden on the examiner because of excessive and non-overlapping searches, and the evolution of complex and unfamiliar patentability issues relating to examining multiple and distinct inventions. Restriction is therefore proper under guidelines of MPEP 803.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 1, 9-10 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to nonelected inventions, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 12-1-06.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "optimum" is considered vague and indefinite because this is a relative term.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section

351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claim 2 is rejected under 35 U.S.C. 102(e) as being anticipated by Yoshida et al.

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

7. Claims 2-3 are rejected under 35 U.S.C. 102(e) as being anticipated by Kojima et al.

8. Regarding both Yoshida et al and Kojima et al, there is disclosed generating fine particles, classifying the particles generated according to a desired particle diameter in the gas, exhausting the gas for transporting the fine particles after classifying, collecting the classified particles onto a substrate and generating a transport medium at the same time, and depositing the particles and transparent medium onto the substrate at the sate time (Yoshida et al: col 10, lines 7-28. Kojima et al: fig 4, col 43, lines 13-65).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 2, 4-6, 8 are rejected under 35 U.S.C. 103(a) as being obvious over Yoshida et al.

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(l)(1) and § 706.02(l)(2).

In this alternative interpretation, there is not disclosed "fabricating a quantum dot functional structure" as is recited in the preamble. It would have been obvious to one with ordinary skill in the art to utilize the method to fabricate such because of a required accuracy needed in the art per se.

Regarding claims 4-6, there are disclosed parameters for temperature and pressure as important per se such that one with ordinary skill in the art would require the recitations as claimed (col 6, lines 30-35, col 10, lines 35-41; col 17, lines 57-67, col 18, lines 1-15).

11. Claims 2-6, 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kojima et al.

In this alternative interpretation, there is not disclosed "fabricating a quantum dot functional structure" as is recited in the preamble. It would have been obvious to one with ordinary skill in the art to utilize the method to fabricate such because of a required accuracy needed in the art per se.

Regarding claims 4-6, there are disclosed parameters for temperature and pressure as important per se such that one with ordinary skill in the art would require the recitations as claimed col 43, lines 12-22).

12. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida et al or Kojima et al as applied to claim 2 above, and further in view of Chrisey et al.

Neither Yoshida et al or Kojima et al disclose CCD to observe the plasma plume.

Chrisey et al discloses a CCD to observe the plasma plume (pages 128, line 20; fig 5.9 on page 129.

It would have been obvious to one with ordinary skill in the art to include a CCD to observe the plasma plume because Chrisey et al.teaches on-line diagnostics (page 161, lines 29-37).

Conclusion

13. The prior art made of record to Chrisey et al may be found in the parent application.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alain L. Bashore whose telephone number is 571-272-6739. The examiner can normally be reached on about 7:30 am to 5:00 pm (Mon. thru Thurs.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Alain L. Bashore
Primary Examiner
Art Unit 1762